

## SYSTEM AND METHOD FOR CONTROLLING THE ACOUSTIC SIGNATURE OF A DEVICE

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### ABSTRACT

A system receives information regarding current flight conditions of a device such as an aircraft and determines the acoustic level of the sonic boom and/or other noise generated by the device during operation. The current acoustic level is compared to a desired level, and various cues are displayed to operators regarding corrective actions that can be taken to reduce or maintain the acoustic level at the desired level. The system also predicts future acoustic levels based on current operating conditions, and varies the urgency of the cues based on whether and how quickly the device will exceed the desired acoustic level. Options to limit maneuvers and to automatically adjust operating condition parameters can be enabled. Options to display additional information regarding past, current, and predicted acoustic levels can also be selected. Signals that can be used to automatically control the acoustic level of a device during operation can also be generated for use in devices that can operate autonomously.